

ATLAS OF TIDAL CURRENT CHARTS IN THE ST. LAWRENCE ESTUARY

The International Hydrographic Bureau has recently received from the Hydrographic and Map Service of the Department of Mines and Resources, Canada, an Atlas of Tidal Current Charts for the St. Lawrence Estuary along the main steamship route between Orleans Island and Father Point.

These tidal current charts have been compiled from observations taken from a vessel anchored in various positions during the summer seasons 1934 to 1937 inclusive, measurements of direction and rate being taken continuously, day and night, over several tidal cycles at a depth of three fathoms.

The charts from St. Jean (Orleans Island) to Cape St. Joseph are referred to the times of High and Low Water at Quebec and those from Ile aux Coudres (opposite C. St. Joseph) to Father Point are referred to the times of High and Low Water at Father Point; they are numbered for each hour after high or low water at these places.

The directions of the streams corresponding to tides of *average* range are shown both by arrows and by the number of degrees, reckoned from True North clockwise, printed centrally over the arrows.

The rates in knots for *average* tides are printed beneath the arrows and are also represented graphically by the lengths of the arrows according to a fixed scale. Directions and rates for *small* tides are also shown in degrees and knots at the tails of the arrows and for *large* tides at the heads of the arrows. For streams more variable than usual two arrows indicate the limits of direction and the average rate only is given.

Results are given for 65 different stations and the navigator is thereby enabled to determine the direction and rates of current at any stage of the tide as he proceeds along or near the Steamship route from the entrance to the North Traverse, a short distance below Quebec, via the North Channel, to the more open water off Father Point or vice versa; a comprehensive view of the tidal current movement as a whole is also given over a great extent of the estuary. Another valuable aid to the navigation of the River St. Lawrence is thus presented to mariners in a clear and precise form.

J.D.N.

